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Immunology at Eye Level: An Artistic View of the Immune System

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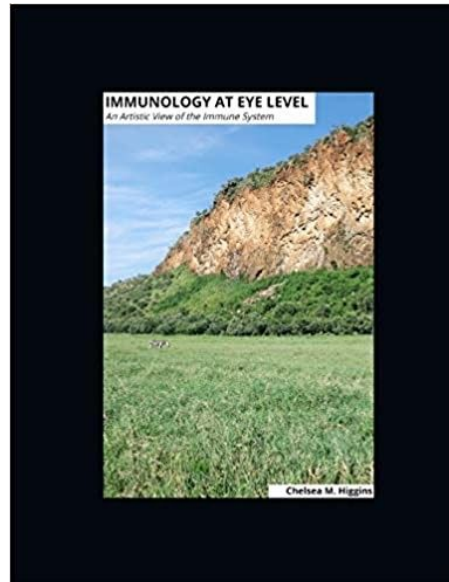
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Immunology at Eye Level: An Artistic View of the Immune System

by Chelsea Higgins

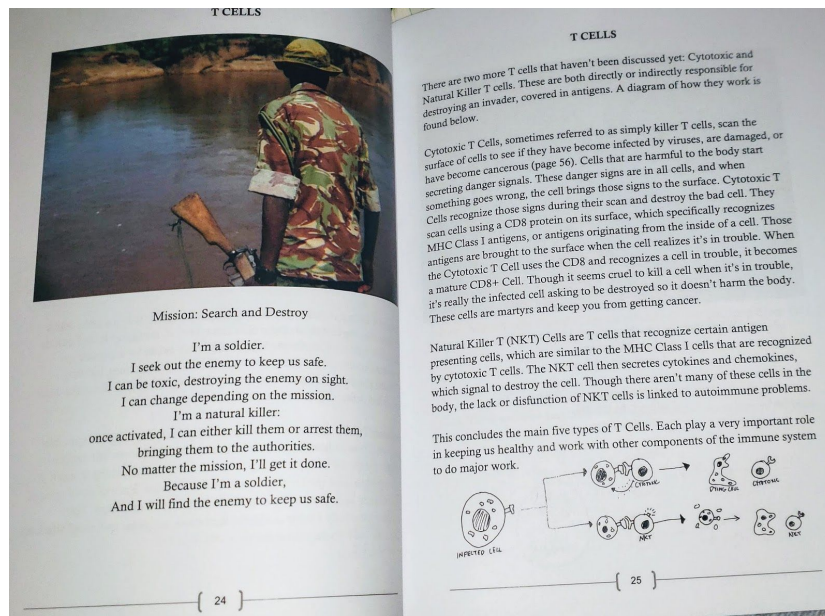


If you browse through your social media, I have no doubt that you will see some sort of post or commentary discussing fake news, anti-vaccination groups, disease, or the covid pandemic. Even my friends and family members, who are educated adults, have innocently made inaccurate claims about health information, simply because they have never studied immunology. Spreading false information about immunology can be especially harmful because of its direct impact on the health of others. If someone chooses to refuse vaccinations for themselves or their child, they threaten herd immunity. If a diseased patient doesn't comply with a prescribed treatment plan, they could have negative health outcomes. I created *Immunology at Eye Level* to combat immunological ignorance in the general public. Communicating with one generation is much different than communicating with another, but by focusing on educated adults outside of STEM, hopefully, these adults will teach their family and foster more constructive, beneficial conversations amongst the general public.

To communicate with educated adults outside of STEM, I had to determine the prior knowledge held and decide the best educational method. I asked my parents, my friends, and my non-STEM professors what they knew about immunology without telling anyone about the project because I wanted their honest responses without fear of seeming ignorant. The prior knowledge was about at the level I expected - everyone has heard of the basics, but no one could define them. From there, I decided to explain each topic through art. Originally, this project was much broader, as I had a 200 page outline with music, in-depth explanations, and mixed media portraits. As time

progressed, it became clear that this project needed focus. I wanted *Immunology at Eye Level* to be a guide, not a textbook. A 200 page book would be intimidating to the general public. The project became a 79 page book that uses poetry, illustration, and photography to explain science.

Mid-project, I went abroad and realized the best way to make a lasting impact would be to make people see different processes in their daily lives. I used the photos I took while in Kenya because I wanted people to see themselves in the simple photos I took. By just looking at the picture, you understand exactly what is going on and can focus on the connection with the text. I wrote the poetry to connect the photo and science, and after my editors reviewed the first draft, I added illustrations to show what was going on at a molecular level. By carefully formatting each topic, the reader can see everything on one page, making it possible to focus on one topic at a time.



Topic Example, left

The picture shows the book open to the T Cell section, showcasing the formatting, art, poetry, and illustrations that separate my book from a textbook.

Throughout its creation, the book was seen by upwards of 30 people, including people in my target audience, including middle school teachers, arts professors, and college students; and experts in immunology, including Dr. Diana Colgan in Immunology and Dr. Angela Cordle in Biology. Once it was published, I took to my personal social media, where each advertisement post was met with engagement (facebook: 142 likes, 32 comments, and at least two shares; instagram: 97 likes, 10 comments, and at least two shares). Additionally, three copies of my book have shipped, and others have been purchased, though Kindle Direct Publishing doesn't share that data. I've also ordered 30 author copies to distribute to editors, midwestern libraries, clinics, my Kenyan home,

and classrooms. In the coming months, I will publish an ebook version, and I tentatively plan to transform this into a series where I dedicate one book to each organ system and a new country, showing science around the world.

Social Media Advertisements

Facebook (left) and Instagram (right)



This project has taught me a great deal, but the biggest lesson has been one of focus. When I first dreamed up this project, I tried to make it as fabulously inclusive as possible, which would have actually ended up alienating my target audience. Though it was initially very painful, limiting the scope enabled me to broaden my impact to anyone with a high school science knowledge. Through precision and flexibility, I created *Immunology at Eye Level*, a basic guide to the immune system, which fuses science and art to make complex topics simpler and, dare I say it, fun.